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## On *Ourapteryx persica*-complex, with descriptions of three new species (Geometridae, Ennominae)

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**Abstract** *Ourapteryx persica* Ménéttriès is redescribed, three new species related to it are described: *O. falciformis* from Caucasus and North Iran, *O. ussurica* from Southeast Siberia and North Korea and *O. japonica* from Japan. All the moths and genitalia are illustrated.

**Key words** *Ourapteryx*, incorrect subsequent spelling, independent species, furca, signum, Azerbaidzhan, Gruzija.

*Ourapteryx persica* Ménéttriès, 1832, described from Azerbaidzhan, had been treated as a variety or subspecies of *O. sambucaria* (Linnaeus, 1758) (Staudinger, 1901; Prout, 1915, etc.), but since Wehrli, 1940, it has been considered to be an independent species. Prout, 1915, synonymizing *O. nivea* Butler, 1883 from Japan, states its distribution as “from Transcaucasia to Japan”, and Wehrli, 1940, as “Transbaikalia, Ural, Amur, Ussuri und Japan”. Without doubt the two senior authors’ *persica* is a mixture of several species.

As a result of examining the holotype of *persica*, all the specimens of *persica* sensu Wehrli and many more specimens from Caucasus to Japan in my cabinet, I have found that Wehrli mixed up three undescribed species and *O. pluristrigata* Warren, 1888 (= *thibetaria* Bastelberger, 1911) as a single species.

Before going further I express my hearty thanks to Dr V. G. Mironov, Academy of Sciences, St. Petersburg, for his arrangement of loan of the holotype of *Ourapteryx persica* and gift of Caucasian material, and to Dr D. Stüning, Zoologisches Forschungsinstitut u. Museum A. Koenig, Bonn (abbreviated as ZFMK), for his lending of specimens identified by Wehrli as *persica* and for informations on data of specimens under his curation. My thanks are also due to Dr V. S. Kononenko, Academy of Sciences, Vladivostok (Southeast Siberian material), Dr J. Viidalepp, Institute of Zoology & Botany, Tartu (Southeast Siberian material), and many Japanese colleagues for their gifts of specimens.

Unless otherwise stated, all the specimens including the holotypes and paratypes recorded below belong to the British Museum (Natural History), London.

### *Ourapteryx persica* Ménéttriès (Fig. 1.)

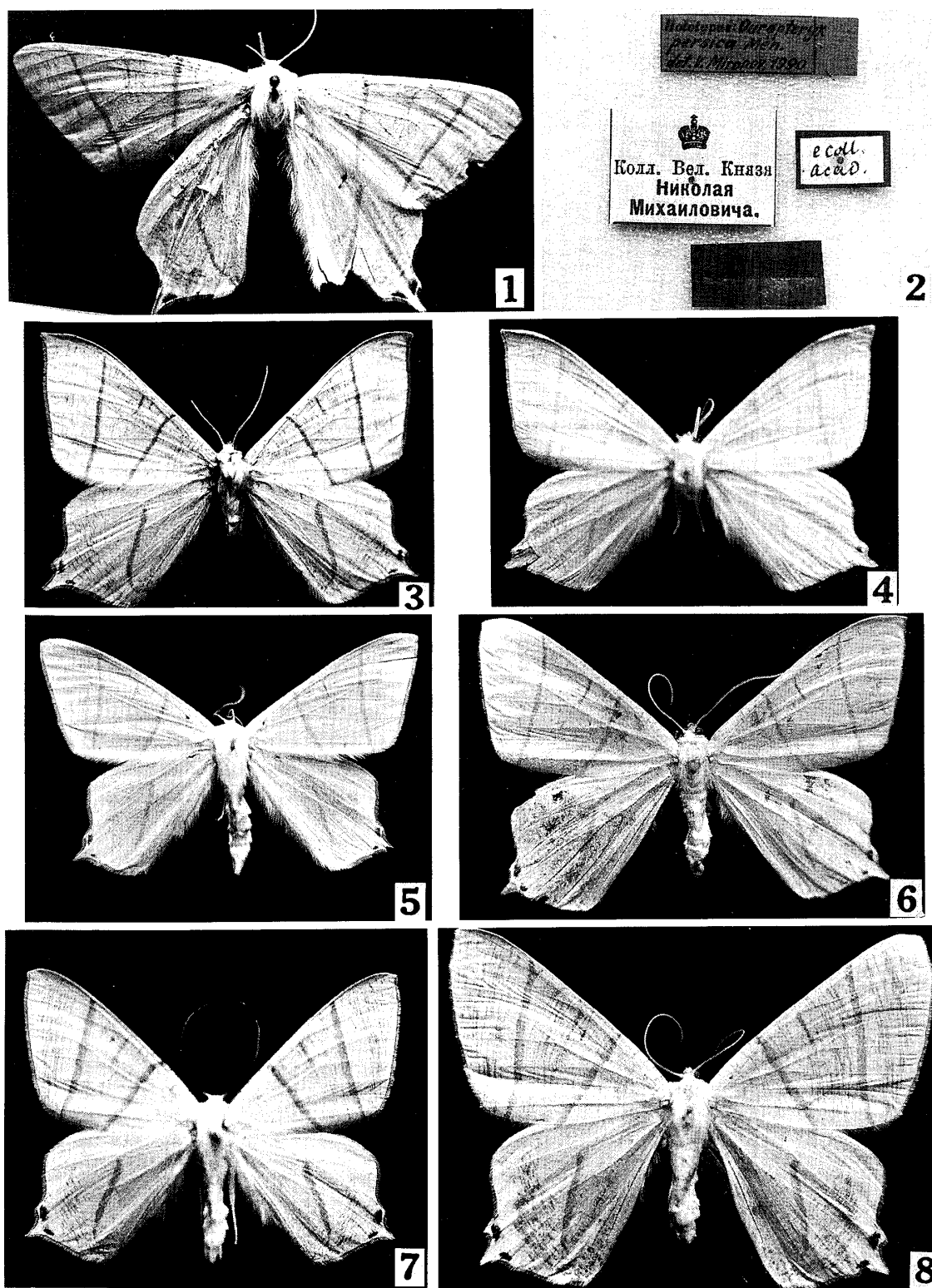
*Uapteryx persica* Ménéttriès, 1832, *Cat. raisonné Objets Zool. recueillis Voyage Caucase Front. Perse*: 267.  
*Uapteryx persicaria*: Lederer, 1853, *Verh. zool-bot. Ges. Wien* **5**: 176; Boisduval, 1840, *Genera et Index Method. eur. Lepid.*: 182; Guenée, 1857, in Boisduval & Guenée, *Hist. nat. Insectes (Lépid.)* **9**: 32 (Incorrect subsequent spelling).

*Ourapteryx sambucaria* v. *persica*: Staudinger, 1901, in Staudinger & Rebel, *Cat. Lepid. Pal. Faunengeb.* (Edn 3) **1**: 330; Thierry-Mieg, 1905, *Naturaliste* **27**: 181.

*Uapteryx ebuleata* f. *persica*: Bastelberger, 1912, *Intern. ent. Z.* **5**: 157.

*Ourapteryx sambucaria persica*: Prout, 1915, in Seitz, *Macrolepid. World* **4**: 335.

*Ourapteryx persica*: Wehrli, 1940, in Seitz, *Macrolepid. World* **4** (Supp 1.): 352.



Figs. 1-8. *Ourapteryx* spp. 1. *O. persica* Ménétériès, holotype ♂. 2. *Ditto*, labels. 3. *O. fal-ciformis* sp. nov., holotype ♂. 4. *Ditto*, paratype ♂. 5. *O. ussurica* sp. nov., holotype ♂. 6. *Ditto*, paratype ♀. 7. *O. japonica* sp. nov., holotype ♂. 8. *Ditto*, paratype ♀.

Male. Face ochreous brown. Forewing with apex sharply pointed, termen almost straight, hindwing with tail well-developed, shoulder at the end of vein 6 pronounced.

Forewing with ante- and postmedian line brown, the former oblique, running to the middle of hindmargin, the latter a little oblique, running well-before tornus, cell-end bar very slender. Hindwing with postmedian line arising from dorsal angle of cell-end, curved inward at vein 1, scarcely reaching tornus, among the two tail-end spots dorsal one red brown, proximally edged with dark grey, ventral one much smaller, elongate, red brown dash surrounded by dark grey. Both wings with fringes ochreous brown, but red brown at near tail-end spots. Under surface faintly yellow excepting basal and hindmarginal area. Length of forewing: 28 mm.

Male genitalia (Fig. 9). Characterized by thick furca, curved inward at apical one-fifth, dilated at apical area, reaching base of uncus, valva with costa weakly convex at middle, valvula nearly triangular at apex, aedeagus and cornuti nearly as in *sambucaria*.

Specimen examined. Holotype, ♂: Lenkoran, Azerbaidzhan (Nikolai Mihailovich), in coll. Zoological Museum, Academy of Sciences, St. Petersburg.

Closely related to *O. sambucaria* (Linnaeus) from Europe (eastern limit of range uncertain), but the ground colour white, not pale yellow, forewing with apex not falcate, terminal area of both wings not strongly striated with grey, fringes more reddish, tail-end spots heavier, and apical area of furca more strongly dilated. Unfortunately no additional specimens have been re-discovered; eager waiting discovery of the female for a determinant of its systematic position among the genus.

Distribution. Azerbaidzhan.

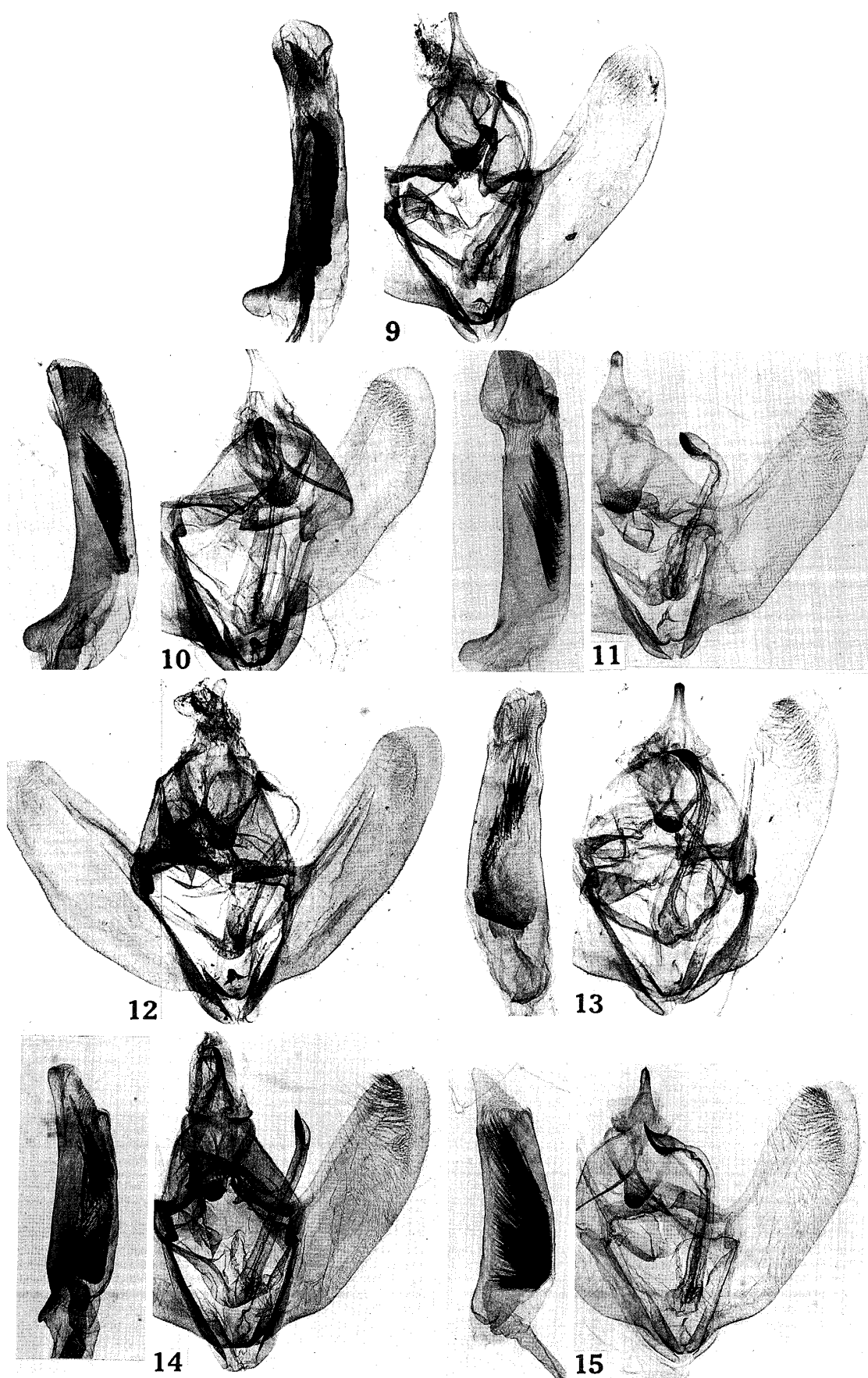
***Ourapteryx falciformis* sp. nov. (Figs. 3, 4)**

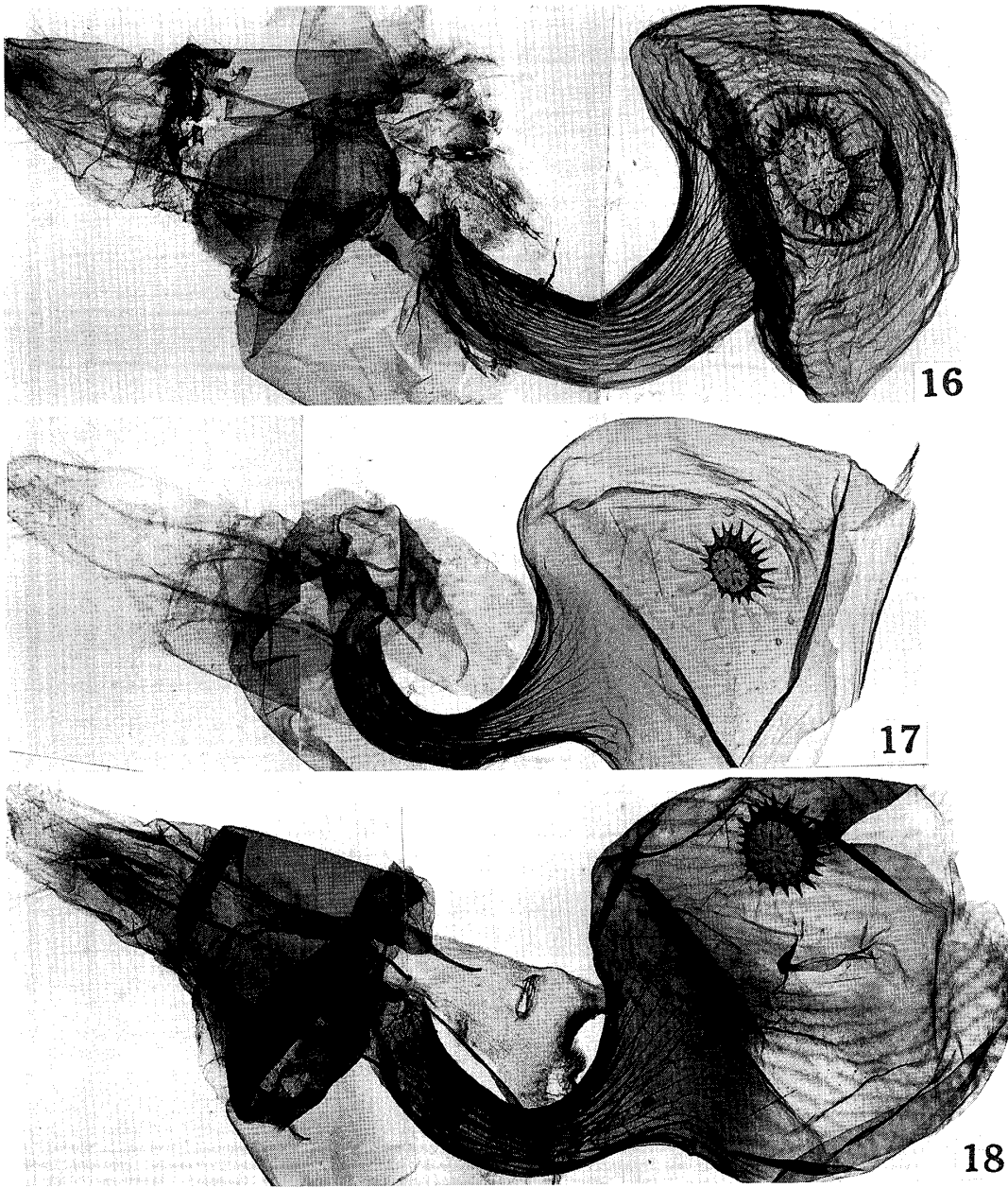
*Ourapteryx persica* (part.): Wehrli, 1940, *loc. cit.*

Male. Very similar to the preceding species, but smaller, forewing with apex falcate, termen weakly concave below apex, transverse lines more slender, fringes paler, hindwing with tail-end spots much smaller, the ventral one represented by a grey dash. Under surface with yellowish tinge much paler than in *persica*. Length of forewing: 23–24 mm.

Male genitalia (Figs. 10–12). Furca shorter, broader at middle, usually more strongly incurved, valva less ample.

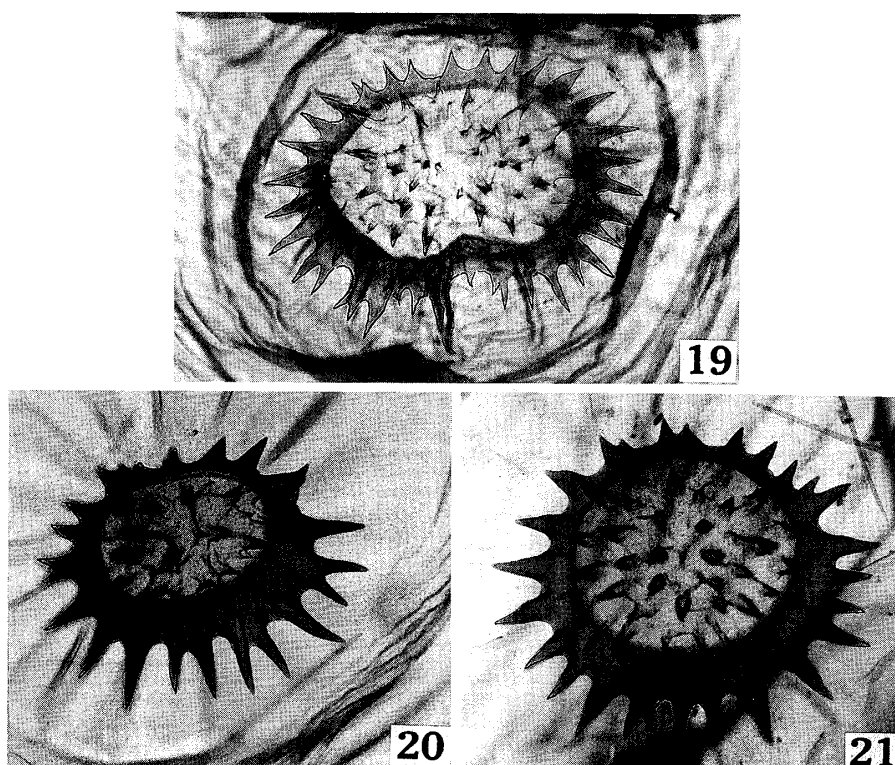
Specimens examined. Holotype, ♂: Persia sept. Elburs mts. c. s. Tacht i Suleiman, Sārdab Tai (Vandarban), 19–2200 m, 11–14. vii. 1937 (E. Pfeiffer & W. Forster, München), Museum A. Koenig. Paratypes. Kucubogerr, 6. vii. 1895, Caucasus, 2 ♂ (N. Filipjev). Nord-Iran, Schahkuh, Westabgh. Geröllzone, 1800–2000 m, vi, 1 ♀, Exp. Wernicke (near type-locality; specimen mentioned by Wehrli in Seitz, *Macrolepid.* 4 (Suppl.): 352, but as ♂); Elisabethpol (=Kirovabad), Caucasus, 1 ♀; Nord-West-Kaucasus, Teberda Tourbasa, 1300 m, UV-Licht, 29. vii–11. viii. 1976, 1 ♂ (F. Eichler); N. Kaucasus, Krasnodarskij Krai, Lasarevsk distr., Vischnevka, 11. vi. 1979, 1 ♂; ZFMK.





Figs. 9-15. Male genitalia of *Ourapteryx* spp. 9. *O. persica* Ménéttriès, holotype. 10. *O. falciformis* sp. nov., holotype. 11. *Ditto*, paratype (H. Inoue Slide 14488). 12. *Ditto*, paratype (H. Inoue Slide 14226). 13. *O. ussurica* sp. nov., paratype (H. Inoue Slide 11298). 14. *O. japonica* sp. nov., paratype (H. Inoue Slide 14230). 15. *Ditto*, paratype (H. Inoue Slide 14486).

Figs. 16-18. Female genitalia of *Ourapteryx* spp. 16. *O. ussurica* sp. nov., paratype (H. Inoue Slide 14228). 17. *O. japonica* sp. nov., paratype (H. Inoue Slide 14487). 18. *Ditto*, paratype (H. Inoue Slide 14231).



Figs. 19-21. Signa of *Ourapteryx* spp. 19. *O. ussurica* sp. nov. (magnified from fig. 16). 20. *O. japonica* sp. nov. (magnified from fig. 17). 21. *Ditto* (magnified from fig. 18).

Distribution. Gruzija (Bol'sh' Kavkaz=Caucasus), North Iran.

***Ourapteryx ussurica* sp. nov. (Figs. 5, 6)**

*Ourapteryx persica* (part.): Wehrli, 1940, *loc. cit.*

Face dark ochreous brown, ventral end whitish, a little duller in coloration than in *falciformis*. Forewing with apex not falcate, thus more similar in shape to *persica* than to *falciformis*. Wings white, grey strigulation nearly as in the preceding two species. Transverse lines usually slender as in the preceding, but rarely thick, the coloration greyish brown; forewing with postmedian line running into tornus or a little proximal to it, cell-end bar clearer than in the precedings. Hindwing with postmedian line nearly straight, vanished at vein 2 or between veins 2 and 1. Base of fringes blackish, the remaining part ochreous. Hindwing with tail shorter than in the precedings, the two spots as in *falciformis*, the ventral one merely a small blackish dot or dash. Under surface faintly yellowish as in *falciformis*. Length of forewing: 1st brood, ♂ 22-25 mm, ♀ 26-28 mm; 2nd brood, ♂ 20 mm, ♀ 23-25 mm.

Male genitalia (fig. 13). Furca strongly curved at two-thirds from base, terminating in a sharply defined mass of spines, in other respects very similar to the two preceding species.

Female genitalia (fig. 16). Ductus bursae thick, heavily striated, curved at middle, signum (fig. 19) large, elliptical, frill narrow, densely spined, spines short and slender.

Specimens examined. Holotype, ♂: Sikhote Alin Mts., Thugujevski rj. Dvnts, Berjovoi stats., 11. viii. 1978 (Metsaviir, Viidalepp, Ruben, Vasjurin). Paratypes. Russia:



Ussuri basin, Juznoi, 11-16. vii. 1973, 1 ♂ (Viidalepp, Tiivel, Kullman). Amur, 1880, 1 ♂, Museum A. Koenig. Ussuri, 15. viii. 1926, 1 ♂; 18. viii. 1981, 1 ♂ (A.U. Ubakob). Kedrovaja Pad., Primorye, 24. vii. 1973, 3 ♂ 2 ♀ (V. Kononenko); *ditto*, 29. vii. 1974, 1 ♂ (V. Kirpichnikova). Peishla, Primorye, 22. vii. 1990, 1 ♂ 1 ♀ (S. Sugi). Amur, 1880, 1 ♂ (*ex* Coll. Staudinger); Amur, 1880, 1 ♂ (Wehrli gen. prep. no. 1993) (*ex* Coll. Staudinger); Amur, 1880, 1 ♂ (as *Ourapteryx persica* Mén., illustrated in Seitz, *Macrolepid.* 4 (Suppl.) by Wehrli); Raddefka, 1886, 1 ♂ (*ex* Coll. Staudinger); Asia or., T. amurenses, 1 ♂ (E. Pfeiffer, München); Sutschanski-Rudnik, Wladiwostock, occ., Ussuri, August, 1 ♂; Dalnyj Vostok, vic. Kaimanovka, 17. vii. 1960, 1 ♂; Primorje, Lazo distr., Lazo, 25. vii. 1980, 1 ♂ (A. T. Aniskowitsch); ZFMK. N. Korea: Prov. Ryang-gang, Hyesan, room of Hotel Hyesan, 25. vii. 1975, 1 ♀ (S. Papp & A. Vojnits), Hungarian National Museum.

Distribution. Southeast Siberia, North Korea.

***Ourapteryx japonica* sp. nov. (Figs. 7, 8)**

*Ourapteryx persica* (part.): Wehrli, 1940, *loc. cit.*; Inoue, 1944, *Trans. Kansai ent. Soc.* 14: 72, pl. 7: 3, 4; *id.*, 1957, in Esaki, *Icon. Heteroc. Jap. Col. Nat.* [1]: 291, pl. 64: 1545, 1546; *id.*, 1959, *Icon. Ins. Jap. Col. Nat. Ed.* 1: 224, pl. 161: 7; *id.*, 1982, *Moths Japan* 1: 572; 2, pl. 108: 9, 10.

Face brownish grey, ventral half much paler, whitish. Shape of wings and size nearly as in *ussurica*. Both wings white, transverse lines grey, much broader than the above cited three species, cell-end bar much clearer and thicker than in *ussurica*, grey strigulation denser, often coalescent at distal area of hindwing. Hindwing with tail-end spots usually heavier than in *ussurica*, the dorsal one red-brown centered, but the ventral one usually a black spot. Fringes greyish on forewing, ochreous on hindwing. Under surface very faintly tinged with yellow. Length of forewing: 1st brood, ♂ 24-28 mm, ♀ 29-32 mm; 2nd brood, ♂ 19-21 mm, ♀ 23-25 mm.

Male genitalia (Figs. 14, 15). Very similar to *ussurica*, but furca a little thicker at apical area.

Female genitalia (Figs. 17, 18). Shape as in *ussurica*, but signum (Figs. 20, 21) circular, frill thicker at ventral (or cephalic) area, surrounded by much fewer spines.

Specimens examined. Holotype, ♂: Yanagisawa Tôge (or Pass), 1,500 m, Enzan, Yamanashi Pref., 15. viii. 1992 (Y. Kishida). Paratypes. Data as holotype, 4 ♂. Mt. Sengen, Hakone, Kanagawa Pref., 17. vi. 1939, 1 ♂; Karuizawa, Nagano Pref., 19-20. vii. 1939, 1 ♂ 2 ♀; Takao-san, Tokyo, 12. ix. 1939, 1 ♂; *ditto*, 2. vii. 1949, 2 ♂; Kumanotaira, Gumma Pref., 25. vi. 1944, 1 ♂; Mikabo-yama, Gumma Pref., 750 m, 14. ix. 1969, 2 ♂; Mitumine-san, 900 m, Saitama Pref., 26. viii. 1984, 1 ♂ 1 ♀; Nangu Spa, Ina, Nagano Pref., 14. vi. 1985, 1 ♀ (H. Inoue). Takao-san, Tokyo, 9. vi. 1951, 1 ♂; *ditto*, 16. vi. 1958, 1 ♂ (K. Ishizuka). Sin-5-gome, Mt. Fuji, Shizuoka Pref., 3. viii. 1970, 1 ♀ (T. Miyata). Nakanosawa, Hachimantai Mts., Akita Pref., 8. vii. 1988, 1 ♂; Gojumagari, Tazawa Town, Akita Pref., 16. viii. 1988, 1 ♂ (A. Sasaki). Karuizawa, Shinano, vii. 1939, 3 ♂ 1 ♀ (H. Inoue); Nyuhtoh Spa, Tazawako Town, Akita Pref., Japan, 23. vii. 1982, 1 ♂ (A. Sasaki); Japan, Akiya, Miura Halbinsel, vii-viii. 1967, 2 ♂ (Nikodemus); Japan, Okutama Valley zwischen Ome und Okutama-ku, 3-15. viii. 1967, 1 ♀ (Nikodemus); ZFMK.

Food plants. *Larix letolepis* (Pinaceae), *Euptelea polyandra* (Eupteleaceae), *Rubus microphyllus* (Rosaceae), *Staphylea Bumalda* (Staphyleaceae) (Nakajima, 1987, in Sugi, *Larvae of larger Moths in Japan* : 111, pl. 46 : 7, 8).

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu).

## 摘 要

*Ourapteryx persica* 群 (フトスジツバメエダシャク) について (井上 寛)

フトスジツバメエダシャクは, Wehrli, 1940 以来 *Ourapteryx persica* Ménéttriès とよばれていたが, サンクトペテルブルグの動物博物館に保存されている *persica* の holotype (♂) を再検討し, Wehrli が *persica* と同定した標本 (グルジア, イラン北部, ロシア沿海州) 及び私の持つ日本や沿海州の標本と比較した結果, 何れもアゼルバイジャン産の *persica* とは別種であることが判明し, 本文で3新種を記載した. その結果, 日本のフトスジツバメエダシャクは, *O. japonica* Inoue という新種となった.

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